PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY
and IDEM NORTHWEST REGIONAL OFFICE

Weil-McLain
500 Blaine Street
Michigan City, Indiana 46360

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 091-12963-00020	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality *Original signed by Paul Dubenetzky*	Issuance Date: April 6, 2001

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the IDEM Northwest Regional Office. The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary gray iron foundry.

Responsible Official:	Thomas O. May, President
Source Address:	500 Blaine Street, Michigan City, Indiana 46360
Mailing Address:	500 Blaine Street, Michigan City, Indiana 46360-2388
SIC Code:	3321
County Location:	LaPorte
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) one (1) High Speed Continuous Sand Mixer (ID Mixer), with a maximum mold sand throughput of 42 tons per hour, controlled by one (1) baghouse (ID Baghouse N), exhausting inside the building.

Note: This High Speed Continuous Sand Mixer replaces the Floor muller, which was decommissioned in December, 1999. It will be used in association with the existing Floor molding line which has a maximum metal throughput capacity of 3 tons per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.

(2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.

(3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

IDEM Northwest Regional Office
Gainer Bank Building, Suite 418
504 North Broadway
Gary, Indiana 46402

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement the PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, and the IDEM Northwest Regional Office upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and the IDEM Northwest Regional Office. IDEM, OAQ, and the IDEM Northwest Regional Office may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or the IDEM Northwest Regional Office makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or the IDEM Northwest Regional Office within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

IDEM Northwest Regional Office
Gainer Bank Building, Suite 418
504 North Broadway
Gary, Indiana 46402

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

IDEM Northwest Regional Office
Gainer Bank Building, Suite 418
504 North Broadway
Gary, Indiana 46402

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and the IDEM Northwest Regional Office not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, and the IDEM Northwest Regional Office, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.7 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this approval. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. Unless otherwise specified in this approval, all monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.8 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.9 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or the IDEM Northwest Regional Office makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or the IDEM Northwest Regional Office within a reasonable time.

(b) Unless otherwise specified in this approval, all record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.10 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

IDEM Northwest Regional Office
Gainer Bank Building, Suite 418
504 North Broadway
Gary, Indiana 46402

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and the IDEM Northwest Regional Office on or before the date it is due.

(c) Unless otherwise specified in this approval, any quarterly report required in Section D of this approval shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) one (1) High Speed Continuous Sand Mixer (ID Mixer), with a maximum mold sand throughput of 42 tons per hour, controlled by one (1) baghouse (ID Baghouse N), exhausting inside the building.

Note: This High Speed Continuous Sand Mixer replaces the Floor muller, which was decommissioned in December, 1999. It will be used in association with the existing Floor molding line which has a maximum metal throughput capacity of 3 tons per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-2] [40 CFR 52.21]

This source will limit the throughput of sand to the High Speed Continuous Sand Mixer (ID Mixer) to a maximum of 42,924 tons of sand per twelve (12) consecutive month period, rolled on a monthly basis.

This limit will limit total VOC emissions from the Mixer to less than 25 tons per year. Compliance with this limit makes 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) and 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) emissions from the High Speed Continuous Sand Mixer (ID Mixer) shall not exceed 42.97 pounds per hour when operating at a process weight rate of 84,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this approval, is required for this facility and its control device.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

During the period within 180 days after issuance of this permit, in order to demonstrate compliance with Condition D.1.2, the Permittee shall perform PM testing on baghouse N utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.5 Particulate Matter (PM)

In order to comply with Condition D.1.2, the baghouse (ID Baghouse N) for PM control shall be in operation and control emissions from the High Speed Continuous Sand Mixer (ID Mixer) at all times that the Mixer is in operation.

This requirement will also ensure that PM and PM10 emissions from the Mixer are controlled to less than 25 and 15 tons per year, respectively, so that the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 are not applicable to this modification.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the throughput of sand to the High Speed Continuous Sand Mixer (ID Mixer) in tons per month. These records shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.1.1.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this approval.

D.1.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this approval, using the reporting forms located at the end of this approval, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and IDEM NORTHWEST REGIONAL OFFICE

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Weil-McLain
Source Address: 500 Blaine Street, Michigan City, Indiana 46360
Mailing Address: 500 Blaine Street, Michigan City, Indiana 46360-2388
Source Modification No.: 091-12963-00020

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and IDEM NORTHWEST REGIONAL OFFICE

Part 70 Source Modification Quarterly Report

Source Name:	Weil-McLain
Source Address:	500 Blaine Street, Michigan City, Indiana 46360
Mailing Address:	500 Blaine Street, Michigan City, Indiana 46360-2388
Source Modification No.:	091-12963-00020
Facility:	High Speed Continuous Sand Mixer (ID Mixer)
Parameter:	Sand throughput
Limit:	This source will limit the throughput of sand to the High Speed Continuous Sand Mixer to a maximum of 42,924 tons of sand per twelve (12) consecutive month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Weil-McLain
500 Blaine Street
Michigan City, Indiana 46360-2388

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____ .
(Company Name)

4. I hereby certify that Weil-McLain, 500 Blaine Street, Michigan City, Indiana, 46360, completed construction of the new High Speed Continuous Sand Mixer on _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on November 14, 2000 and as permitted pursuant to **Significant Source Modification No. SSM-091-12963, Plant ID No. 091-00020**
issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS
COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality
and IDEM Northwest Regional Office

Addendum to the
Technical Support Document for a Part 70 Significant Source Modification

Source Name:	Weil-McLain
Source Location:	500 Blaine Street, Michigan City, Indiana 46360
County:	LaPorte
Source Modification No.:	091-12963-00020
SIC Code:	3321
Permit Reviewer:	Trish Earls/EVP

On March 1, 2001, the Office of Air Quality (OAQ) had a notice published in The News Dispatch, Michigan City, Indiana, stating that Weil-McLain had applied for a Significant Source Modification to construct an additional high speed continuous sand mixer (ID Mixer) at their existing gray iron foundry. The notice also stated that OAQ proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

Condition C.4 of the Significant Source Modification was erroneously missing a parentheses after the word "monitor". The corrected condition now reads as follows:

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor**)** in a six (6) hour period.

Likewise, in the paragraph discussing the applicability of 326 IAC 5-1 (Visible Emissions Limitations) to this source in the State Rule Applicability section of the Technical Support Document (TSD), an additional parentheses is erroneously included after the word "readings" in paragraph (b).

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. The paragraph discussing the applicability of 326 IAC 5-1 to this source now reads as follows:

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

Indiana Department of Environmental Management
Office of Air Quality
and IDEM Northwest Regional Office

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	**Weil-McLain**
Source Location:	**500 Blaine Street, Michigan City, Indiana 46360**
County:	**LaPorte**
SIC Code:	**3321**
Source Modification No.:	**091-12963-00020**
Permit Reviewer:	**Trish Earls/EVP**

The Office of Air Quality (OAQ) has reviewed a modification application from Weil-McLain relating to the construction and operation of a sand mixer at the existing gray iron foundry.

History

On November 14, 2000, Weil-McLain submitted an application to the OAQ requesting to add an additional high speed continuous sand mixer (ID Mixer) to their existing plant. The new Mixer will replace an existing sand muller (ID Floor Muller) which was removed from the source in December, 1999. The molding sand produced at the Mixer will be used at the existing Floor molding line. While the maximum molding sand throughput capacity will increase, the metal throughput capacity to the molding line remains unchanged. Since the metal throughput is the bottleneck of this molding line, there is no de-bottlenecking occurring as a result of the addition of the new Mixer.

Weil-McLain submitted an application for a Part 70 permit on July 19, 1996. The Title V permit application (T-091-6295-00020) is currently being reviewed by IDEM.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-7-5(16):

(a) one (1) High Speed Continuous Sand Mixer (ID Mixer), with a maximum mold sand throughput of 42 tons per hour, controlled by one (1) baghouse (ID Baghouse N), exhausting inside the building.

Note: This High Speed Continuous Sand Mixer replaces the Floor muller, which was decommissioned in December, 1999. It will be used in association with the existing Floor molding line which has a maximum metal throughput capacity of 3 tons per hour.

Existing Approvals

The source applied for a Part 70 Operating Permit (T091-6295-00020) on July 19, 1996. The source has been operating under previous approvals including, but not limited to, the following:

(a) OP 46-09-82-0099, issued on August 24, 1978;
(b) OP 46-09-86-0167, issued on November 1, 1983; and
(c) CP 091-2183-00020, issued on October 17, 1991.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
30-E-1	Bldg. 30	45	3.5	18,000	80 - 90
30-E-2	Bldg. 30	45	3.5	18,000	80 - 90
30-E-3	Bldg. 30	45	3.5	18,000	80 - 90
30-E-4	Bldg. 30	45	3.5	18,000	80 - 90
30-E-5	Bldg. 30	45	3.5	18,000	80 - 90

Note: These are the roof vents of the building in which the new Mixer will be located. The baghouse controlling emissions from the Mixer exhausts inside the building. There are no stacks from the Mixer that exhaust to the atmosphere.

Recommendation

The staff recommends to the Commissioner that the Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 14, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 and 2).

Potential To Emit Before Controls (Modification)

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

Pollutant	Potential To Emit (tons/year)
PM	662.26
PM-10	99.34
SO_2	0.0
VOC	215.23
CO	0.0
NO_x	0.0

Note: See Appendix A, page 1 for emission factors used to calculate potential emissions.

HAP's	Potential To Emit (tons/year)
Naphthalene	less than 10
Formaldehyde	less than 10
Xylene	less than 10
TOTAL	less than 25

Justification for Modification

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM-10, and VOC is greater than 25 tons per year. Therefore, the Part 70 source is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC IAC 2-7-10.5(g). This Part 70 Significant Source Modification will give the source approval to construct and operate the new emission unit.

This source is not eligible for a Part 70 Minor Source Modification under 326 IAC 2-7-10.5(d)(5) because although the source is accepting a sand throughput limitation to avoid the requirements of 326 IAC 2-2 (PSD), discussed on the following page, a control device must also be used to limit PM emissions below the PSD major modification threshold of 25 tons per year. Therefore, since potential PM emissions before control exceed the PSD major modification threshold of 25 tons per year, the source does not satisfy the criteria under 326 IAC 2-7-10.5(d)(5)(C)(iii).

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM-10	attainment
SO_2	maintenance
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO_2	less than 100
VOC	greater than 250
CO	less than 25
NOx	less than 100

(a) This existing source is a major stationary source because an attainment regulated pollutant emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

(b) These emissions are based upon the Title V application (T091-6295-00020) which is currently pending with IDEM.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Mixer*	0.08	0.01	0.0	24.90	0.0	0.0	1.06
Total Emissions	0.08	0.01	0.0	24.90	0.0	0.0	1.06
PSD Significant Levels	25	15	40	40	100	40	n/a

* Source is requesting a sand throughput limitation to the Mixer to limit VOC emissions below PSD significant thresholds and to avoid the requirements of 326 IAC 8-1-6 (BACT). PM and PM10 emissions from the Mixer are controlled by a baghouse.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply. Because of this, it was not necessary to include any emissions reductions that may have resulted from the removal of the existing sand muller (ID Floor Muller) in December, 1999.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this modification.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This existing secondary metal production source, which is one of the 28 listed source categories, is a major PSD source. Therefore, this source will limit the throughput of sand to the Mixer to a maximum of 42,924 tons of sand per twelve (12) consecutive month period, rolled on a monthly basis. This will limit total VOC emissions from the Mixer to less than 40 tons per year so that the requirements of this rule do not apply to this modification. Also, the baghouse (ID Baghouse N) controlling PM and PM10 emissions from the Mixer shall be in operation at all times that the Mixer is in operation. This will limit total PM and PM10 emissions from the Mixer to less than 25 and 15 tons per year, respectively, so that the requirements of this rule do not apply to this modification.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) emissions from the Mixer shall not exceed 42.97 pounds per hour based on a process weight rate of 42 tons per hour and the following:

Interpolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

The baghouse (ID Baghouse N) shall be in operation at all times the Mixer is in operation, in order to comply with this limit.

326 IAC 8-1-6 (Best Available Control Technology)

This modification is not subject to the requirements of this rule. This rule applies to new emission units with potential VOC emissions of greater than 25 tons per year. This source will limit the throughput of sand to the Mixer to a maximum of 42,924 tons of sand per twelve (12) consecutive month period, rolled on a monthly basis. This will limit total VOC emissions from the Mixer to less than 25 tons per year, therefore, the requirements of this rule do not apply to this modification.

Testing Requirements

Testing of particulate matter emissions from the High Speed Continuous Sand Mixer is required because potential PM emissions before control are greater than 40 tons per year and the baghouse must be used to achieve compliance with 326 IAC 6-3-2 and to limit PM emissions below 25 tons per year to avoid the requirements of 326 IAC 2-2 and 40 CFR 52.21 (PSD).

Testing of VOC emissions from the High Speed Continuous Sand Mixer is not required because emission calculations were based on a 1997 Ohio Cast Metals Association (OCMA) study of chemically bonded core and mold-making processes used in Ohio foundries which has been determined to be an accepted method to calculate VOC emissions from mold making. Also, a control device is not needed to comply with the synthetic minor VOC emission limit of less than 25 tons per year.

Testing of PM10 emissions from the High Speed Continuous Sand Mixer is not required because emission calculations were based on standard emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23, which is an accepted emission factor for foundry operations. Also, a control device is not needed to comply with the synthetic minor PM10 emission limit of less than 15 tons per year.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this modification since the Mixer does not exhaust to the atmosphere.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Quality (OAQ) Part 70 Application Form GSD-08.

(a) This modification will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations (Appendix A, page 2 of 2).

Conclusion

The operation of the High Speed Continuous Sand Mixer at the existing gray iron foundry shall be subject to the conditions of the attached proposed **Significant Source Modification No. 091-12963-00020**.

Appendix A: Grey Iron Foundry Operations
Potential VOC, PM, and PM10 Emission Calculations
From High Speed Continuous Sand Mixer

Company Name: Weil-McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360-2388
Source Mod. No.: 091-12963
Plt ID: 091-00020
Reviewer: Trish Earls
Date: November 14, 2000

VOC Emissions Based on Maximum Sand Usage

Process	Maximum Sand Usage Rate (tons/hr)	Emission Factor (lb VOC/ton sand)	Potential VOC Emissions (lbs/hr)	Potential VOC Emissions (tons/yr)
Mixer	42	1.17	**49.14**	**215.23**

VOC Emissions Based on Limited Sand Usage

Process	Limited Sand Usage Rate (tons/hr)	Emission Factor (lb VOC/ton sand)	Limited VOC Emissions (lbs/hr)	Limited VOC Emissions (tons/yr)
Mixer	4.9	1.17	**5.69**	**24.90**

METHODOLOGY
VOC emission factor from a 1997 study performed by the Ohio Cast Metals Association (OCMA).

PM Emissions Based on Maximum Sand Usage

Process	Maximum Sand Usage Rate (tons/hr)	PM Emission Factor (lb PM/ton sand)	PM10 Emission Factor (lb PM/ton sand)	Potential PM Emissions (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM10 Emissions (lbs/hr)	Potential PM10 Emissions (tons/yr)
Mixer	42	3.6	0.54	**151.20**	**662.26**	**22.68**	**99.34**

Baghouse Control Eff.	Controlled PM10 Emissions (tons/yr)	Controlled PM Emissions (tons/yr)
99.90%	**0.10**	**0.66**

PM Emissions Based on Limited Sand Usage

Process	Limited Sand Usage Rate (tons/hr)	PM Emission Factor (lb PM/ton sand)	PM10 Emission Factor (lb PM/ton sand)	Potential PM Emissions (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM10 Emissions (lbs/hr)	Potential PM10 Emissions (tons/yr)
Mixer	4.9	3.6	0.54	**17.49**	**76.62**	**2.62**	**11.49**

Baghouse Control Eff.	Controlled PM10 Emissions (tons/yr)	Controlled PM Emissions (tons/yr)
99.90%	**0.01**	**0.08**

METHODOLOGY
PM and PM10 emission factors from USEPA's FIRE version 6.23 Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants.
PM emission factor can also be found in USEPA's AP-42, Table 12.10-7.

Appendix A: Grey Iron Foundry Operations
HAP Emission Calculations

Company Name: Weil-McLain
Address City IN Zip: 500 Blaine Street, Michigan City, IN 46360-2388
Source Mod. No.: 091-12963
Plt ID: 091-00020
Reviewer: Trish Earls
Date: November 14, 2000

Material	Process	Usage Rate (lbs/yr)	Weight % Phenol	Weight % MDI	Weight % Naphthalene	Weight % Formaldehyde	Weight % Xylene	Phenol Emissions (ton/yr)	MDI Emissions (ton/yr)	Naphthalene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Xylene Emissions (ton/yr)
Phenolic Urethane Nobake Binder System												
Part I Binder	Mixer	638,293	10.00%	0.00%	0.00%	0.10%	3.00%	0.00	0.00	0.00	0.01	0.56
Part II Binder	Mixer	565,065	0.00%	40.00%	3.00%	0.00%	0.00%	0.00	0.00	0.50	0.00	0.00
Reduction Factors for Binder System								**0.00**	**0.00**	**0.50**	**0.01**	**0.56**

Pollutant	Part I Binder Reduction Factor	Part II Binder Reduction Factor
Phenol	0	NA
MDI	NA	0
Naphthalene	0.0585	0.0585
Formaldehyde	0.02	NA
Xylene	0.0585	0.0585

Total HAPs (tons/yr)	
Total State Potential Emissions:	**1.06**

METHODOLOGY

HAP Emissions from Resins = Max. Annual Usage Rate * % HAP * Reduction Factor * 1 ton/2000 lbs

Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries", and refers to the weight percent of HAP that is emitted to the atmosphere.